Customer No.: 31561
Docket No.: 11439-US-PA
Application No.: 10/605,160

AMENDMENT

In the Claims:

Claims 1-6 (canceled)

Claims 7 (currently amended) An ionized physical vapor deposition (I-PVD) process, comprising the steps of:

providing a plasma reaction chamber having a target and a wafer pedestal set up within the chamber, wherein an ionization unit is set up between the target and the wafer pedestal and a conductive mesh set up between the ionization unit and the wafer pedestal;

placing a wafer on the wafer pedestal; and

applying a negative bias voltage to the target and a smaller negative bias voltage to the conductive mesh for depositing a thin film over the wafer, wherein the negative bias voltage applied to the target produces and accelerates ionized metallic atoms, and the conductive mesh being applied with the smaller negative bias voltage decelerates the ionized metallic atoms.

Claim 8 (original) The I-PVD process of claim 7, wherein before the step of depositing a thin film over the wafer, further comprises applying a negative bias voltage to the target without applying any bias voltage to the conductive mesh to form a film layer over the wafer and then applying a negative bias voltage to the target and a smaller negative bias voltage to the conductive mesh to form a thin film over the film layer.

Claim 9 (currently amended) The I-PVD process of claim 8, wherein the film layer has a thickness ~~between~~ ranged from 20% to 30% of the ultimate thickness of the thin film.

Claim 10 (original) The I-PVD process of claim 7, wherein the process of depositing the thin film further comprises passing a reactive gas into the reaction chamber.

Claim 11 (original) An ionized physical vapor deposition (I-PVD) process, comprising the steps of:

producing ionized metallic atoms inside a reaction chamber and accelerating the ionized metallic atoms at a first acceleration rate towards a wafer; and

passing the ionized metallic atoms through a conductive mesh before reaching the wafer such that the ionized metallic atoms are able to decelerate and form a metallic thin film on the wafer.

Claim 12 (original) The I-PVD process of claim 11, wherein before the step of forming a metallic thin film over the wafer, further comprising:

producing ionized metallic atoms inside the reaction chamber such that the ionized metallic atoms accelerate at a second acceleration rate through the conductive mesh to reach the wafer and form a film layer over the wafer, wherein the second acceleration rate is smaller than the first acceleration rate; and

accelerating the ionized metallic atoms towards the wafer at the first acceleration rate such that the ionized metallic atoms decelerate after passing through the conductive mesh to form the metallic thin film over the film layer.

Claim 13 (original) The I-PVD process of claim 11, wherein the step of producing ionized metallic atoms further comprises passing a reactive gas into the reaction chamber.